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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,139	06/20/2003	Keith Winstein	22061-14	5941

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EXAMINER	
WYSZOMIERSKI, GEORGE P	

ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/601,139	WEINSTEIN, KEITH	
	Examiner	Art Unit	
	George P. Wyszomierski	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *6/20/03 (Divisional Application)*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The following is a quotation of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
>
> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-4, 8-13 and 17 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for certain gold-based compositions which contain gallium, indium and copper in a 6:3:1 ratio, does not reasonably provide enablement for the full scope of these claims. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims because independent claim 10 is directed to an alloy containing 2-14% in total of Ga, In, and Cu, but it is unclear what other element(s) can make up the majority of the claimed composition. The entire point of inventiveness in the alloy composition art is to determine what combinations of alloying elements and in what proportions actually work, i.e. are suitable for a given purpose. The rejected claims do not define what element(s) constitute a majority of the alloy. Other than combinations of elements as defined in the specification (e.g. certain gold-based compositions), the specification as filed lacks any disclosure which would allow one of ordinary skill in the art to practice an invention commensurate in scope with claims 1-4, 8-13 and 17.

3. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) It is unclear what Applicant's definition is of the term "gold-based". Generally, an alloy is considered "based" on whatever metal makes up the majority of its contents. However, several of the instant claims recite "gold-based" alloys as containing less than 50% gold (e.g. claims 3, 4, 12, 13). Clarification is required as to how much gold is required in order to make a gold-based alloys in accord with the invention.

b) In claim 1, it appears that "gallium, indium, and copper" should not be in a Markush group, but rather should all be indicated as required ingredients of the claimed composition. Clearly, if these elements are present in a ratio of 6:3:1, then all three elements must be present.

c) It appears that the temperatures recited in ^{0}F in claims 8, 9, 10, 16 and 17 should actually be recited in ^{0}C, and will be treated as such for purposes of examination. Even the high end value of 1550 ^{0}F is equivalent to approximately 840 ^{0}C, which would appear to be far too low of a melting temperature for alloys containing the components as presently recited.

d) It is unclear what is being claimed in instant claim 10, i.e. either

i) a material comprised of Ga, In and Cu in a 6:3:1 ratio, which material can be used as an additive to a solder in an amount of 2-14%, or

ii) a solder material that contains the components of (i) in an amount of 2-14%.

Clarification is required.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3-5 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nawaz (U.S. Patent 4,591,483).

Nawaz discloses alloys containing 20-65% gold, and which may further comprise gallium, indium and copper in amounts overlapping the amounts as defined in the instant claims. The Nawaz alloys have a melting temperature in the ranges recited in claims 8-10; note the values in ^{0}C in the Table in columns 3-4 of Nawaz.

Nawaz does not disclose any specific examples having a Ga:In:Cu ratio as presently claimed. However, the composition as broadly recited in, e.g. claim 1 of Nawaz overlaps the composition as presently claimed. In view of the overlap, the disclosure of Nawaz is held to create a prima facie case of obviousness of the presently claimed invention because Nawaz indicates that the prior art compositions possess utility over the entire range as claimed in the prior art patent. Compare *In re Malagari* (182 USPQ 549).

6. Claim 10 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 12 of U.S. Patent No. 6,372,060.

Although the conflicting claims are not identical, they are not patentably distinct from each other because if one interprets instant claim 10 in a manner as set forth in item 3(d)(i) supra, then the composition of claim 12 of the patent would appear to be an embodiment of the composition of the instant claim. The functional language ("for lowering the melting point...") in the respective claims does not render the instant claim patentably distinct from the claim of the

'060 patent, because identical materials would be expected to possess the same properties or abilities to lower the melting temperature of either gold or platinum.

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 2, 6, 7 and 11-17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112 set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. Effective July 15, 2005, all patent application related correspondence transmitted by facsimile must be directed to the new central facsimile number, (571)-273-8300. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GPW
September 29, 2005

GEORGE WYSZOMIERSKI
PRIMARY EXAMINER
GROUP 1700